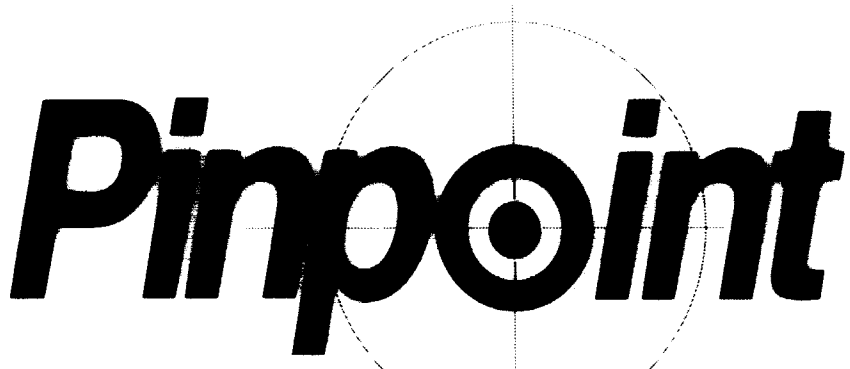

COMMUNICATIONS, INC.

Ex Parte Presentation
PR Docket No. 93-61
April 25, 1994

Wide-Area AVM Serves Important Public Interest Objectives

- Intelligent Vehicle-Highway Systems (IVHS)
  - Traffic monitoring and control
  - Emergency roadside assistance
  - In-vehicle information
- Fleet management
- Stolen vehicle recovery
- Advantages over other vehicle location systems, such as far superior urban coverage where demand is greatest

Pinpoint Communications, Inc.
Ex Parte Presentation - PR Docket No. 93-61

Pinpoint
COMMUNICATIONS, INC.

The Wide-Area AVM Marketplace Should be Governed by Competition

- Record reveals a diversity of approaches
- Final rules should accommodate this diversity to the extent practicable
- Competition should decide which systems best serve the public interest

Pinpoint's ARRAY™ System

- Spectrally efficient automatic vehicle monitoring
  - 12-16 MHz spectrum requirements in 902-928 MHz band
  - Compatible with other wide-area systems through time-sharing
  - Can co-exist with other users of the band (ISM, government, local-area AVM, amateurs, Part 15)
- High-capacity, accurate vehicle location
  - 1,000+ vehicles per second
  - Raw 30-foot accuracy, 95% of time
- High-speed data-messaging
  - Data on same signal as vehicle location function
  - 300 kbps
- Proven in Washington experimental system

The Entire 902-928 MHz Band Should Be Made Available to Wide-Area Systems

- Intentions of wide-area systems to meet demand for AVM require access to entire 26 MHz of 902-928 MHz band
- Wide-area systems are compatible with local-area systems
  - Wide-area AVM operators have indicated that wide-are systems can operate sufficiently well in the presence of local-area systems
  - Local-area systems have not indicated that wide-are systems are a potential interference problem
- Wide-area systems are compatible with Part 15 devices
  - Part 15 devices should continue to be allowed to operate throughout 902-928 MHz band consistent with obligations of noninterference
  - Wide-area AVM industry supports adoption of an objective standard of "harmful interference" in the 902-928 MHz band from Part 15 devices
    - Objective standard would remove uncertainty in cases of interference
    - Both wide-area system and Part 15 device developers would have benchmark for measuring compatibility

A Band Plan Is Available That Would Accommodate the Diversity of Wide-Area AVM Proponents

- Pinpoint modification of basic Teletrac proposal
- 912-928 MHz sub-band available to wide-area AVM systems on time-sharing basis and co-primary with local-area AVM systems
- 902-912 MHz sub-band available to wide-area AVM systems an a primary basis, generally superior to local-area systems

912-928 MHz Sub-Band

- Wide-area and local-area systems share on a co-primary basis
- All financially and technically qualified wide-area AVM applicants filing within a filing window would negotiate a time-sharing arrangement from common, equivalent bargaining positions
  - Negotiated arrangements may include elements of frequency division, CDMA, statistical spatial diversity, wideband forward links, and other characteristics of particular qualifying designs
  - In the absence of a successful negotiation, simple default round-robin arrangement would take effect
  - Plan has the potential for future entrants through reopening of the window
- Sub-band would give local-area AVM systems opportunities for a least two, and as many as three, 6 MHz channels, as desired by several local-area system proponents
- Wide-area systems would have to tolerate Part 15 devices up to a certain interference ceiling

902-912 MHz Sub-Band

- Commission could license this sub-band in one of several ways:
  - frequency division
    - *e.g.*, 902-906 MHz, 906-910 MHz, 910-912 MHz channelization
    - would seem to accommodate, for example, MobileVision, Teletrac, and Southwestern Bell
    - narrowband forward links could be located within the system's channel or at 927.5 - 928 MHz
  - statistical spatial diversity (Teletrac ex parte proposal)
  - time-sharing
- Any grant of exclusivity in the face of mutually exclusive may require spectrum auctions under recent Communications Act amendments
- Existing local-area systems should be grandfathered and required to move only in instances of actual interference that are not otherwise reconciled
- Local-area AVM systems should be permitted to attenuate side-band energy below 912 MHz on a primary basis subject to strict power limits

Incidental Operations Could Be Accommodated in Other Spectrum Allocations

- Voice operations
  - Emergency basis only in 902-928 MHz band
  - Otherwise, in cellular, SMRS, PCS, or other private radio or common carrier band
- Data operations
  - On same signal as vehicle location pulses (Pinpoint)
  - In same channel as vehicle location pulses (Southwestern Bell) subject to any sharing mechanism in place
  - In narrowband forward link

The Commission Should Not Drop the Proposed Allocation of 902-928 MHz to AVM in Favor of Enhancing the Position of Part 15 Devices

- Part 15 industry asks the Commission to overturn long-standing and sound spectrum allocation policies
- Consideration of other spectrum for wide-area AVM would delay implementation of wide-area AVM by several years right at the time several operators are ready to implement their networks
- Commission has recently made available over 40 MHz of unlicensed PCS spectrum that could be used for Part 15 devices in addition to the hundreds of MHz that could be used to support the functions such devices serve, on both a licensed and unlicensed basis

The Commission Should Allocate the 902-928 MHz Band to Wide-Area AVM Expeditiously

- As the Commission recognizes, wide-area AVM will bring a host of important services to the American public and will be central to the introduction of IVHS
- The industry has been under a cloud of uncertainty for almost two years
- Any substantial further delay may weaken the present opportunities to establish a development of a highly competitive environment for the provision of AVM services, in our nation's urban centers in particular